

Title (en)
ARTIFICIAL RETINA DEVICE WITH STIMULATING AND GROUND RETURN ELECTRODES DISPOSED ON OPPOSITE SIDES OF THE NEURORETINA AND METHOD OF ATTACHMENT

Title (de)
KÜNSTLICHE NETZHAUT MIT STIMULATIONS- UND RÜCKFÜHRELEKTRODENAN GEGENÜBERLIEGENDEN SEITEN DER NEURORETINA UND VERFAHREN ZUR ANBRINGUNG

Title (fr)
PROTHESE RETINIENNE ARTIFICIELLE A ELECTRODES DE STIMULATION ET DE RETOUR DE MASSE DISPOSEES DE PART ET D'AUTRE DE LA NEURORETINE, ET SON PROCEDE D'IMPLANTATION

Publication
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Application
EP 01928985 A 20010501

Priority
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• US 56484100 A 20000504

Abstract (en)
[origin: WO0183026A1] An artificial retinal device (10), implanted in the subretinal space of the eye in persons with certain types of retinal blindness, induces artificial vision by electrical stimulation of the remaining viable cells of the retina. The artificial retina device (10) includes a stimulation electrode unit (12) preferably placed in the subretinal space and a tail-like extension (30) housing a distant electrode ground electrode unit (16) that may be placed in the vitreous cavity. The stimulating electrode unit includes an array of electrode subunits (22). Each electrode subunit (22) includes one or more microphotodiodes (23a) electrically connected, for example, in series to provide increased voltage and current to the microelectrode. The stimulation electrode unit (12) and the ground return electrode (14) of the ground return electrode unit (16) are preferably disposed on opposite sides of the neuroretina to allow for efficient and high resolution transretinal electrical stimulation of the neuroretinal cells.

IPC 8 full level
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